APPENDIX I

GLOSSARY

ABO—Aviators breathing oxygen.

ACM—Air-cycle machine.

ACS—Air-conditioning system.

ADC—Air data computer.

AFC—Airframes change.

AIMD—Aircraft intermediate maintenance department.

ALLOY—A metal that is a mixture of two or more metals.

AMBIENT—Surrounding; adjacent to; next to. For example, ambient conditions are physical conditions of the immediate area such as ambient temperature, ambient humidity, ambient pressure, etc.

AN—Air Force—Navy (standard or specification).

ANOXIA—A complete lack of oxygen in the blood stream.

APU—Auxiliary power unit.

BIT—Built in tester.

BLEED AIR—Hot, high-pressure air, taken from the compressor section of a jet engine.

CAD—Cartridge and cartridge-actuated devices.

CAUTION—An operating procedure, practice, etc., that if not strictly observed could result in damage to or destruction of equipment.

CDI—Collateral duty inspector.

CELSIUS—A temperature scale using 0 as the freezing point of water and 100 as the boiling point. The scale has 100 equal divisions between the 0 and 100 with each division designated a degree. A reading is usually written in an abbreviated form; e.g., 75°C. This scale was formerly known as the centigrade scale, but it was renamed in recognition of Anders Celsius, the Swedish astronomer who devised the scale.

CF₃Br—The chemical symbol for trifluorobromomethane.

CNO—Chief of Naval Operations.

CONTAMINANT—An impurity such as harmful foreign matter in a fluid.

EI—Engineering investigation.

FCDC—Flexible confined detonating cord.

FLSC—Flexible linear shaped charge.

GPM—gallons per minute.

Hg-Mercury.

IMA—Intermediate maintenance activity.

IPB—Illustrated parts breakdown.

JULIAN DATE—The year and numerical day of the year identified by four numeric characters. The first character indicates the year and the remaining three characters specify the day of the year. For example, 3030 indicates the 30th day of 1983.

KINKED—A twist or curl, as in cable, wire, or tubing, caused by its doubling or bending upon itself.

LOX—Liquid oxygen.

MAINTENANCE—The function of retaining material in or restoring it to a serviceable condition.

MBEU—Martin-Baker Ejection Unit (seat).

MIM—Maintenance Instruction Manual.

MRC—Maintenance Requirements Card.

MULTIMETER—An instrument used for measuring resistance, voltage, or amperage.

NADEP—Naval Aviation Depot.

NATOPS—Naval Air Training and Operating Procedures Standardization.

NAVAIRSYSCOM—NAVAIR; NA (Naval Air Systems Command).

NFO—Naval flight officer.

NOMENCLATURE—A system of names; systematic naming.

NOTE—An operating procedure, condition, etc., which, because of its importance, is essential to highlight.

NSN—National stock number.

OPNAV—Office of the Chief of Naval Operations.

OXIDATION—That process by which oxygen unites with some other substance, causing rust or corrosion.

PSI—Pounds per square inch.

PSIA—Pounds per square inch absolute.

PSIG—Pounds per square inch gauge.

PRESSURE—The amount of force distributed over each unit of area. Pressure is expressed in pounds per square inch (psi).

RAC—Rapid Action Change.

SAFETY WIRE/LOCKWIRE—A wire set into a component to lock movable parts into a safe, secure position.

SDLM—Standard depot-level maintenance.

SE—Support equipment. All the equipment on the ground needed to support aircraft in a state of readiness for flight. Formerly ground support equipment (GSE).

SERVICING—The filling of an aircraft with consumables such as fuel, oil, and compressed gases to predetermined levels, pressure, quantities, or weights.

SMDC—Shielded mild detonating cord.

SOLVENT—A liquid that dissolves other substances.

TENSION—A force or pressure exerting a pull or resistance.

TORQUE—A turning or twisting force.

TOXIC—Harmful, destructive, deadly; poisonous.

VOLATILE LIQUIDS—Liquids that are readily vaporizable at relatively low temperatures. Explosive liquids.

WARNING—An operating procedure, practice, etc., that if not followed correctly could result in personal injury or loss or life.

WORK—The transference of energy from one body or system to another. That which is accomplished by a force acting through a distance.

APPENDIX II

REFERENCES

CHAPTER 1

- Environmental Control Systems, NAVAIR 01-85, ADF-2-2.5.1, Naval Air Systems Command, Washington, DC, August 1988
- Escape and Survival Systems, NAVAIR 01-85, ADF-2-2.4, Naval Air Systems Command, Washington, DC, May 1987.
- Utility, Environmental and Personnel Survival Equipment, NAVAIR 01-85WBA-2-2.4, Section II, Naval Air Systems Command, Washington, DC, April 1981.
- Principles of Operation Environmental Control System, NAVAIR 01-S3AAA-2-2.7, Work Packages 00900, 01100, and 01300, Naval Air Systems Command, Washington, DC, September 1985.
- Principles of Operation Propulsion System, NAVAIR 01-S3AAA-2-2.6, Work Package 004 08, Naval Air Systems Command, Washington, DC, April 1980.
- Principles of Operation Environmental Control System, A1-F18AA-410-100, Work Packages 00800, 01200, and 01300, Naval Air Systems command, Washington, DC, March 1980.
- Airborne Weapons/Stores Loading Manual, NAVAIR 01-F14AAA-75, Chapter 2, Naval Air Systems Command, Washington, DC, July 1984.
- Maintenance Environmental Control System, NAVAIR 01-F1AAA-2-4-2, Work Package 05500, Naval Air Systems Command, Washington, DC, September 1983.
- Principles of Operation Environmental Control System, NAVAIR 01-F14AAA-2-2-2, Work Package 01000, Naval Air Systems Command, Washington, DC, January 1984.
- Ground Support Equipment, NAVAIR 01-F14AAA-4-15, Work Package 01400, Naval Air Systems Command, Washington, DC, March 1982.
- Principles of Operation Airframe Group Systems, NAVAIR 01-S3AAA-2-2.2, Work Packages 00307, 00308, 00309, and 013 13, Naval Air Systems Command, Washington, DC, July 1977.
- Description and Principles of Operation Escape and Survival System, NAVAIR 01-45AAE-2-2.3, Work Package 00500, Naval Air Systems Command, Washington, DC, October 1985.

T2 B/C Personal Survival, NAVAIR 01-60GAB-2-2.2, Chapter 2, Naval Air Systems Command, Washington, DC, December 1987.

CHAPTER 2

- Principles of Operation Environmental Control System, NAVAIR 01-F14AAA-2-2-2, Work Packages 01400 and 02000, Naval Air Systems Command, Washington, DC, January 1984.
- Principles of Operation Escape System, NAVAIR 01-F14AAA-2-2-3, Work Package 006 00, Naval Air Systems Command, Washington, DC, January 1984.
- Escape and Survival Systems, NAVAIR 01-85ADF2-2.4, Naval Air Systems Command, Washington, DC, May 1987.
- T2 B/C Utility System, NAVAIR 01-60GAB-2-2.3, Chapter 2, Naval Air Systems Command, Washington, DC, December 1987.
- Escape and Survival Systems, NAVAIR 01-S3AAA-4-8, Page 1, Naval Air Systems Command, Washington, DC, November 1984.
- General Use Cartridges and Cartridge-Actuated Devices for Aircraft and Associated Equipment, NAVAIR 11-100-1.1, Chapter 1, Naval Air Systems Command, Washington, DC, September 1984.

CHAPTER 3

- Environmental Control Systems, A1-F18AC-410-100, Work Packages 00500, 00700, 00800, and 00900, Naval Air Systems Command, Washington, DC, August 1988.
- Utility, Environmental and Personnel Survival Equipment, NAVAIR 01-85WBA-2-2.4, Section II, Naval Air Systems Command, Washington, DC, April 1981.
- Navy Electricity and Electronics Training Series, NAVEDTRA 172-03-00-85, Module 3, Chapter 1, Naval Education and Training Program Development Center, Pensacola, FL, 1985.
- Principles of Operation Environmental Control System, NAVAIR 01-S3AAA-2-2.7, Naval Air Systems Command, Washington, DC, September 1985.
- Vapor Cycle Charging Cart Assembly, NAVAIR 17-15BH-14, Naval Air Systems Command, Washington, DC, June 1966.
- Principles of Operation Environmental Control System, Al-H60BB-410-100, Work Package 00300, Naval Air Systems Command, Washington, DC, March 1983.

CHAPTER 4

NAVAIROSH Requirements for the Shore Establishment, NAVAIR A1-NASOH-SAF-0001P-5100-1, Naval Air Systems Command, Washington, DC, February 1986.

- Aviators Breathing Oxygen (ABO) Surveillance Program and Field Guide, A6-332A0-GYD-000, Naval Air Systems Command, Washington, DC, October 1985.
- Escape and Survival Systems, NAVAIR 01-85ADF-2-2.4, Naval Air Systems Command, Washington, DC, May 1987.
- Clifton Precision Instrument and Life Support Division, Publication NO. 7596L, Davenport, Iowa, January 1983.
- Clifton Precision Instrument and Life Support Division, Publication NO. 7974A, Davenport, Iowa, January 1983.
- *Technical Report NO. SY-136R-81*, Naval Air Test Center, Patuxent River, Maryland, December 1981.

CHAPTER 5

- Servicing Trailer, Liquid Oxygen Low Loss, Closed Loop, NAVAIR 19-25D-26, Naval Air Systems Command, Washington, DC, October 1987.
- Gaseous Oxygen Servicing Trailer, NAVAIR 19-25D-1, Naval Air Systems Command, Washington, DC, October 1985.
- Tank Storage, Liquid Oxygen, 2,000 Gallon Capacity, NAVAIR 19-5-29, Naval Air Systems Command, Washington, DC, August 1967.
- Liquid Oxygen System Gas Purging Set, NAVAIR 19-25D-27, AVEL Corporation, Naval Air Systems Command, Washington, DC, July 1978.
- Aviators Breathing Oxygen (ABO) Surveillance Program and Field Guide, A6-332AO-GYD-000, Naval Air Systems Command, Washington, DC, October 1985.
- NAVAIROSH Requirements for the Shore Establishment, NAVAIR A1-NAOSH-SAF-0001P-5100-1, Naval Air Systems Command, Washington, DC, February 1986.

CHAPTER 6

- Daily/Special/Preservation Maintenance Requirements Cards, Al-F18AA-MRC-200, Cards 66-69, Naval Air Systems Command, Washington, DC, January 1987.
- FA-18/A Organizational Maintenance Principles of Operation, A1-F18AC-120-100, Work Packages 00500, 00502, and 00503, Naval Air Systems Command, Washington, DC, May 1985.
- *Ejection Seat Assembly,* AS-730CA-MMO-000, Work Packages 00300, 004 00, 00500, 00700, 00800, and 01000, Naval Air Systems Command, Washington, DC, October 1982.
- Principles of Operation Escape and Survival Systems, NAVAIR 01-S3AAA-2-2.8, Naval Air Systems Command, Washington, DC, October 1978.

- Testing and Troubleshooting Escape and Survival Systems, NAVAIR 01-S3AAA-2-3.8, Work Packages 00303 and 00304, Naval Air Systems Command, Washington, DC, February 1976.
- Weapon System Maintenance Escape and Survival Systems, NAVAIR 01-S3AAA-2-4.8, Naval Air Systems Command, Washington, DC, September 1987.
- Aircrew Escape Propulsion System (AEPS) Devices, NAVAIR 11-85-1, Naval Air Systems Command, Washington, DC, June 1985.
- General Use Cartridges and Cartridge-Actuated Devices (CADs) for Aircraft and Associated Equipment, NAVAIR 11-100-1.1, Naval Air Systems Command, Washington, DC, September 1984.
- Cartridges and Cartridge-Actuated Devices (CADs) for Unique Aircraft Systems, NAVAIR 11-100-1.2, Naval Air Systems Command, Washington, DC, September 1984.

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